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CHIGNIK MANAGEMENT AREA
COMMERCIAL SALMON MANAGEMENT PLAN, 1993

By

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ACKNOWLEDGEMENTS

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INTRODUCTION

The Chignik Commercial Salmon Management Area encompasses all coastal waters and inland drainages of the northwest Gulf of Alaska between Kilokak Rocks and Kupreanof Point (Figure 1). The area includes the Chignik River system and approximately 100 other salmon producing streams and tributaries.

The management area is divided into five districts: Eastern, Central, Chignik Bay, Western, and Perryville Districts (Figure 2). The Alaska Department of Fish and Game (ADF&G) manages all districts to achieve escapement goals for all salmon species while allowing for the orderly harvest of fish surplus to spawning requirements.

For 1993, waters closed to salmon fishing are described in the 1992-94 commercial finfish regulation booklet. Three closed water changes were made by the Board of Fisheries in 1987 and a boundary change made in 1989. These changes increased the closed water areas in Ivanof Bay, Portage Bay, Kujulik Bay, and moved the district boundary line between the Western and Central Districts.

Purse and hand purse seines are the only legal gear types for the Chignik Area commercial salmon fishery. In the Eastern, Central, Western and Perryville Districts, no seine less than 100 fathoms or more than 225 fathoms in length may be used. In the Chignik Bay District seines may not be less than 100 fathoms or more than 125 fathoms in length.

This document provides information on the management of the Chignik commercial salmon fisheries. Inseason fishing time will be established by emergency order as relative run strength of salmon stocks are assessed.

SOCKEYE SALMON

The total sockeye salmon run returning in 1993 is forecast to be approximately 2.59 million sockeye salmon¹. The early run, projected to be 1.64 million sockeye salmon, has an escapement goal of 400,000 sockeye salmon with a forecasted harvest of 1.20 million sockeye salmon. Approximately 1.94 million sockeye salmon of the early run will be harvested in the Chignik Management Area. The remaining sockeye salmon will potentially be harvested in either the Cape Igvak or the Southeast District Mainland fisheries. The late run return is expected to be smaller than the early run and forecasted at 950,000 sockeye salmon. The escapement goal for the late run is 250,000 sockeye salmon which should allow a commercial harvest of approximately 700,000 sockeye salmon. Approximately 550,000 of those salmon will also be harvested in the Chignik Management Area. The total projected harvest for both runs is 1.94

¹All harvest projections are based on mid-point projections.

million sockeye salmon of which approximately 1.52 million sockeye salmon are expected to be caught in the Chignik Management Area.

The first commercial fishing period can occur by regulation on June 1. However, based on the last 10 years of data, the first fishery usually occurs after June 11.

Requirements for the first opening includes passing a minimum of 40,000 sockeye salmon through the weir by June 12 and ADF&G's test fisheries indicate a strong buildup of salmon in Chignik Lagoon. Additional openings will be determined from several factors including: escapement counts, commercial catches, and test fishing results (Table 1).

During June, commercial fishing will be allowed only in the Chignik Bay, Central, and Eastern Districts. Commercial salmon fishing will open and close simultaneously in the Eastern, Chignik Bay, and Central Districts as outlined by the Alaska Board of Fisheries' Eastern District Management Plan (5AAC 15.360). During June and early July, the Eastern District may close until the run strength of the Chignik Lake run (Late Run or 2nd Run) can be determined. After July 15, the Eastern District will be managed on the basis of local pink and chum salmon run strength, in addition to sockeye salmon. If it is determined that stocks being harvested within the Eastern District are not primarily Chignik stocks, the fishery in this district will be closed by emergency order as directed by the Alaska Board of Fisheries in the Eastern District Management Plan.

The fisheries in the Cape Igvak Section of the Kodiak Management Area and the Southeastern District Mainland Fishery of the Alaska Peninsula Management Area intercept Chignik bound sockeye salmon. The Cape Igvak and the Southeastern District Salmon Management Plans, as adopted by the Alaska Board of Fisheries, will be used to manage these fisheries (Appendix A and B).

PINK AND CHUM SALMON

The 1993 projected pink salmon harvest is 1.30 million salmon. The projected harvest is based on the average return per spawner data base for even years from 1966 to 1988, and the parent year escapements in 1991.

The projected chum salmon harvest for Chignik waters is 213,000 salmon. Aerial surveys will be conducted to monitor chum salmon escapements. Area specific openings are possible and a 24 hour notice will be given prior to a commercial fishing opening. Openings and closures will be broadcast over 4125 SSB and CH 6 VHF.

The first openings in the Western and Perryville Districts, (includes all waters south and west of Jack Point, excluding the waters of Chignik Lagoon, to Coal Cape), are tentatively scheduled to open on July 6.

Pink and chum management in the Eastern District will be based on the following management plan:

5 AAC 15.360. EASTERN DISTRICT SALMON MANAGEMENT PLAN.

- (a). The Department shall open and close the Eastern District for commercial salmon fishing concurrently with the Chignik Bay and Central Districts. The Department may close the Eastern District for the period between the first (Black Lake) and second (Chignik Lake) sockeye salmon runs.
- (b). The Department shall close the Eastern District on July 15 to evaluate run strength of the pink and chum salmon runs.
- (c). The Department shall close the Eastern District if it is determined that the salmon being harvested in that district are from stocks not originating from spawning areas located in the Chignik Area.

Processors within the Chignik Area primarily freeze fish for the higher quality fresh frozen market. Subsequently, greater demands are placed on management to harvest fish in optimum condition. Management strategies will be adjusted to harvest fish as they migrate to their natal streams, such as increased early fishing effort when a harvestable surplus is available.

Because of the economic importance placed on Chignik sockeye salmon, run timing and strength of the Chignik River runs (Black Lake: Early Run and Chignik Lake: Late Run) will directly affect commercial fishing time in the Eastern, Western, and Perryville Districts.

If the early sockeye salmon run strength (Black Lake) is weaker than forecasted, and the 400,000 salmon escapement goal through the Chignik River weir is not achieved, then the early July openings in all waters where sockeye salmon could be intercepted may be curtailed. Commercial fishing openings during the transition period between the two sockeye salmon runs (June 26 to July 9) will also be closely monitored to allow evaluation of the Chignik Lake run strength to assure the 250,000 salmon escapement goal.

COHO SALMON

Providing escapement goals can be met for the late sockeye run to Chignik Lake, fisheries for late run sockeye and coho salmon will begin in mid-August and continue through September. The coho salmon harvest in 1993 is projected to be 169,000 salmon. The average coho harvest from 1983-92 was 169,000 fish.

Chignik Bay District coho stocks are expected to be in similar abundances as in recent years. Management in smaller systems, particularly in the Eastern District, will continue to be conservative to prevent overharvest during the initial openings.

TENDER AND PROCESSOR REPORTING REQUIREMENTS

- a. 5AAC 15.355. The operator of a floating salmon processing vessel or tender, or a shorebased processing operation, and a company employing aircraft used for transporting salmon, shall report in person, or by radio or telephone, to a local representative of the department located in the management area of intended operation before the start of processing or buying operations. The report must include the location and the date of intended operation, and identify and describe each vessel or other method of transport employed in hauling or processing salmon.
- b. All processors and tender operators will be required to report daily catch information to ADF&G. This can be accomplished either by radio (SSB) or telephone. The Chignik ADF&G office will stand by on 4125 SSB and VHF CH 6 frequencies, between 0800 and 1000 hours and 2000 and 2200 hours. The call sign for Chignik is KGB 76 "Chignik Weir" and the telephone number is 845-2243. If unable to contact ADF&G Chignik, your catch information should be given to ADF&G Cold Bay (532-2419) or Kodiak (486-1830) via telephone or 4125 SSB. The call signs for Kodiak and Cold Bay are WHM 29 and WHW 906, respectively. **Failure to report is a violation of commercial fishing regulations (5 AAC 27.590 (2)); vigorous enforcement of this regulation should be expected.**
- c. Individual code sheets will be given to each tender/processor for the purpose of reporting catch and statistical area of catch.

Table 1. Chignik River system sockeye salmon escapement goals for Black lake (early) and Chignik Lake (late runs), by time period.

The numbers of fish presented in the escapement tables below were derived from averages over several years of escapements of various timing and magnitude. It should be noted that daily escapement levels will fluctuate considerably throughout the run. The tables listed serve only as a guide for achieving the total escapement for each run. In-season variations from the figures listed may be due to variations in actual run timing and/or strength of the run.

DATE	EARLY RUN - 400,000 ESCAPEMENT
JUNE 12	40,000
JUNE 14	50 - 65,000
JUNE 16	75 - 100,000
JUNE 18	125 - 150,000
JUNE 20	175 - 200,000
JUNE 22	225 - 250,000
JUNE 25	275 - 325,000
JUNE 30	350 - 400,000

DATE	LATE RUN - 250,000 ESCAPEMENT	
	EARLY ESCAPEMENT IS ACHIEVED	EARLY ESCAPEMENT IS NOT ACHIEVED
JULY 6	-	40,000
JULY 8	-	45 - 50,000
JULY 10	40,000	55 - 65,000
JULY 12	50 - 60,000	70 - 75,000
JULY 14	65 - 75,000	75 - 80,000
JULY 16	80 - 90,000	80 - 90,000
JULY 19	100 - 115,000	100 - 115,000
JULY 21	125 - 135,000	125 - 135,000
JULY 23	145 - 160,000	150 - 160,000
JULY 26	170 - 180,000	170 - 180,000
JULY 29	185 - 195,000	190 - 195,000
JULY 31	195 - 200,000	195 - 200,000

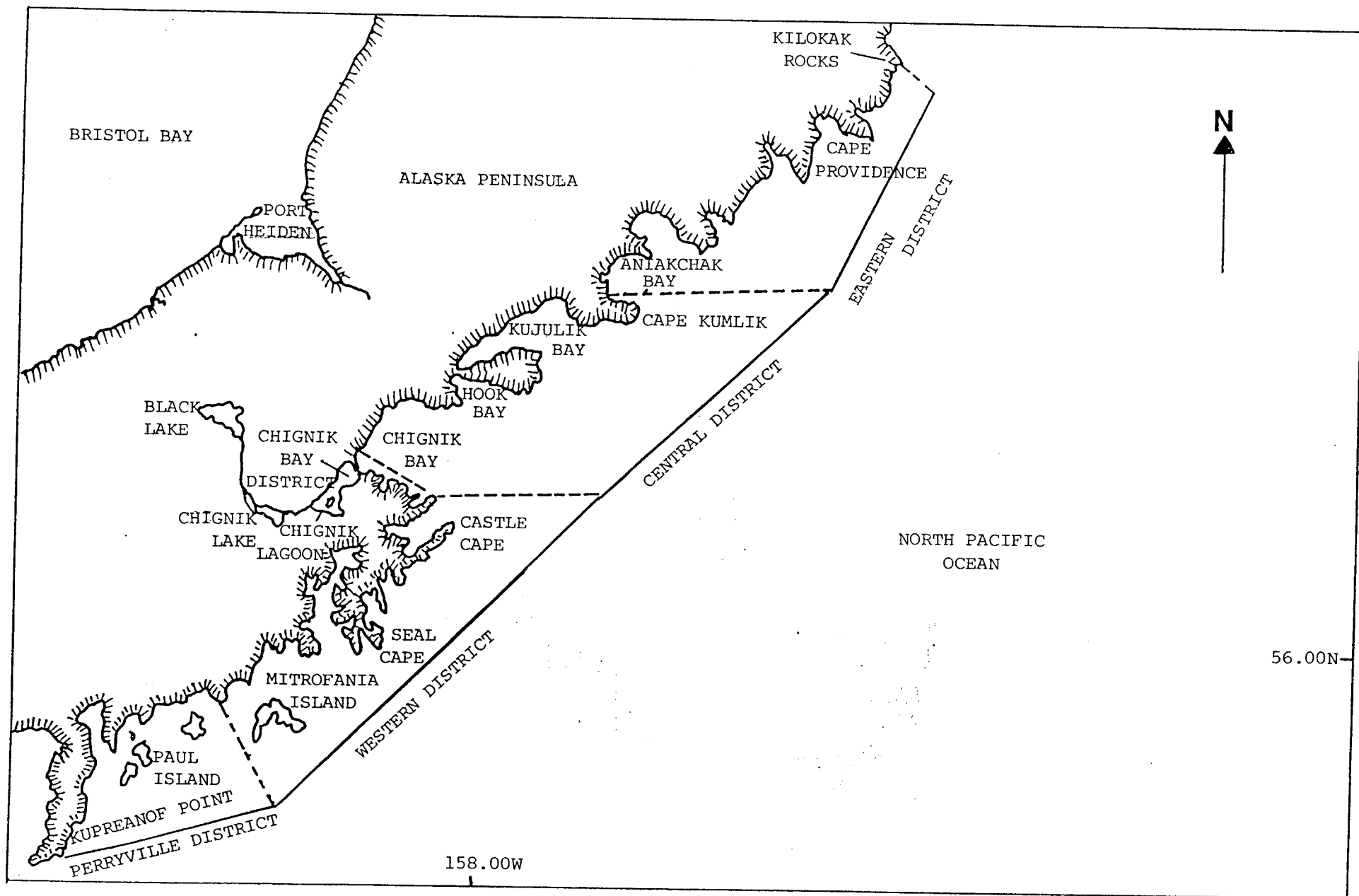


Figure 1 . Map of the Chignik Management Area illustrating district boundaries, 1993.

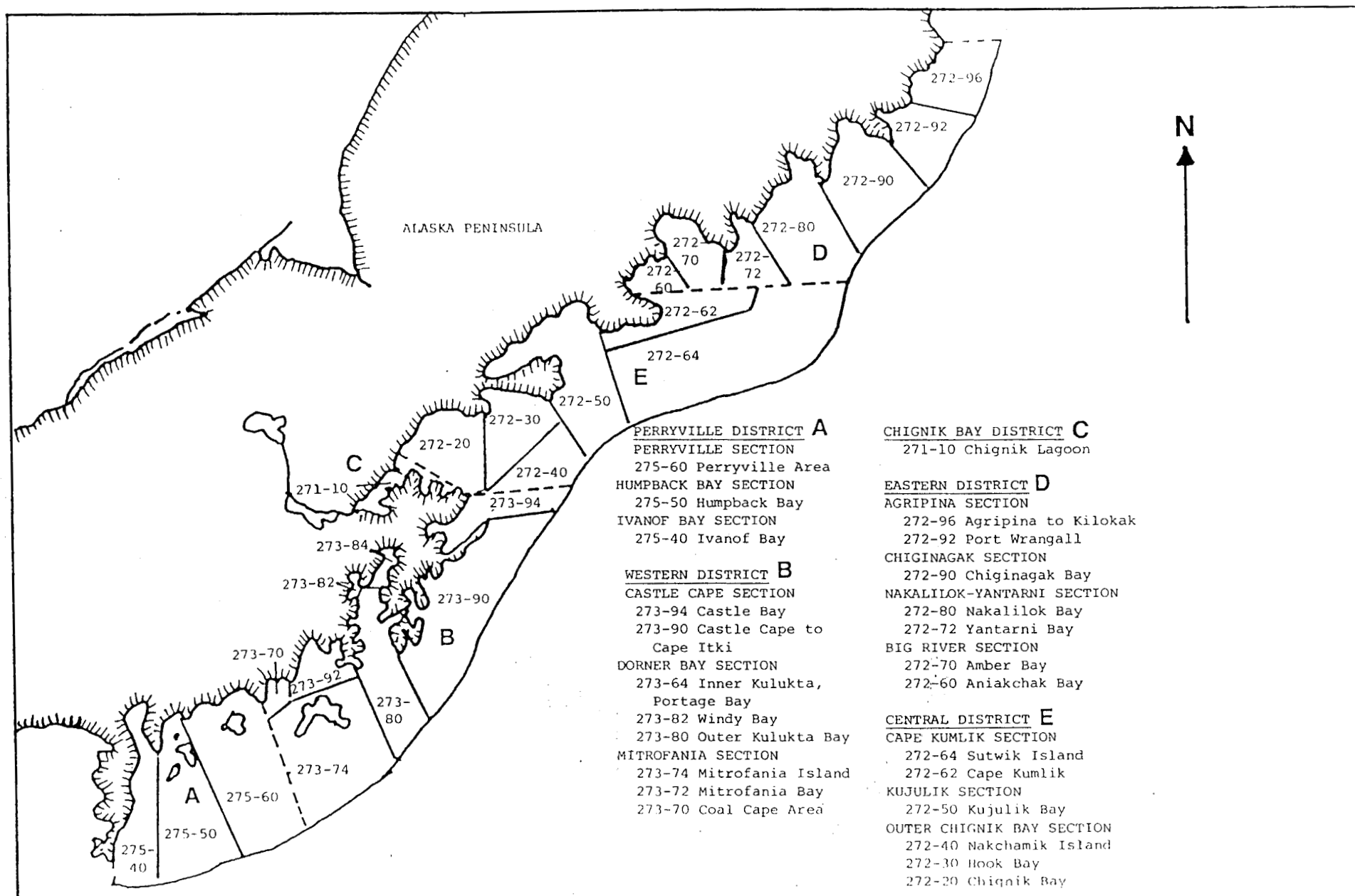


Figure 2 . Map of the Chignik Management Area illustrating statistical areas, 1993.

APPENDIX

Appendix A. Management guide for the Cape Igvak fishery, 1993.

The midpoint harvest figures for the 1993 Chignik sockeye runs are forecast to be 1.20 million for the first run and 0.70 million fish for the second run, or a projected total harvest of 1.94 million Chignik bound sockeye.

The Alaska Department of Fish and Game will manage the Cape Igvak fishery according to the plan adopted by the Board of Fisheries. Since the harvestable surplus is expected to be more than 600,000, the fishery at Cape Igvak can open when the fishery opens at Chignik. Approximately 48 hours notice will be given prior to the first Cape Igvak opening. At least a 24 hour notice will be given prior to the opening of any other fishing period, unless it is an extension of a fishing period in progress. Fishing periods will normally be at least 24 hours long and will begin at 12:01 A.M. If the first run fails, the Cape Igvak fishery will be curtailed in order to allow a minimum harvest in the Chignik Area of at least 300,000 sockeye through July if that many are surplus beyond escapement needs.

During the period from approximately June 26 to July 9, the strength of the second run of Chignik River system sockeye salmon cannot be evaluated at Chignik Lagoon. In order to prevent overharvest of the second run, commercial salmon fishing in the Cape Igvak Section will, at the department's discretion, be disallowed or severely restricted during this period.

Fishing time at Cape Igvak after July 8 will be dependent on the strength of the second run and on the Chignik Area catch during the first run.

When the second run appears strong enough for a fishery at Chignik, Cape Igvak could be opened only if at least 300,000 were harvested from the first run in the Chignik Area. The Department will then manage the fishery so that the number of sockeye salmon harvested in the Chignik Area for both runs combined will be at least 600,000 and the harvest in the Cape Igvak Section will approach as near as possible 15 percent of the total catch of Chignik bound sockeye, if that many fish are available surplus to the escapement needs.

Appendix B. Southeast District Mainland fishery management plan.

**SOUTHEASTERN DISTRICT MAINLAND (ALASKA PENINSULA AREA)
SALMON MANAGEMENT PLAN, 1993**

By

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Alaska Department of Fish and Game
Division of Commercial Fisheries
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MANAGEMENT PLAN

Southeastern District Mainland

The Southeastern District Mainland (Balboa-Stepovak) fishery (Figure 1-2) will be managed according to the Southeastern District Management Plan (Appendix A) as adopted by the Alaska Board of Fisheries during the November 1991 meeting.

The East Stepovak, Northwest Stepovak (except Orzinski Bay), Southwest Stepovak, Balboa Bay, and Beaver Bay Sections will be managed on the basis of the interception of Chignik River sockeye salmon. Orzinski Bay (all waters north of a line from Elephant Point 55°41'50" N.lat., 160°03'18" W.long. to Waterfall Point 55°43'10" N.lat., 160°01'08" W.long. as based on 1983 datum charts) in the Northwest Stepovak Section and the Stepovak Flats Section will be managed on a local stock basis, Orzinski Bay on the basis of the Orzinski Lake sockeye salmon stock and the Stepovak Flats Section on the basis of the Stepovak River chum salmon stock.

When possible, fishing periods in Orzinski Bay and Stepovak Flats will coincide with fishing periods in the remainder of the Southeastern District Mainland fishery to avoid concentrating fishing gear. Through July 25 (the time period covered by the Southeastern District Management Plan), no attempt will be made to coincide fishing periods in the Southeastern District Mainland area with any other nearby fisheries. All fishing periods will be announced by emergency orders. At least 36 hours notice will be given prior to the first commercial fishing period in the fishery. At least 24 hours notice will be given prior to the opening of any other fishing period, unless it is an extension of a fishing period in progress.

In the Southeastern District Mainland area, set gill net gear is the only legal gear type allowed through midnight July 10, while after July 10, set gill net, purse seine, and hand purse seine gear types are allowed.

The forecasted midpoint harvest for the Chignik sockeye salmon runs for 1993 are 1,200,000 salmon for the early run and 700,000 salmon for the second run (Appendix B). If the runs come in as expected and the goals of the management plan are achieved, about 100,000 estimated Chignik destined sockeye salmon will be harvested in the Southeastern District Mainland area prior to July 26. This compares to the recent five-year average of 79,792 and 10-year average of 136,573 (Table 1).

The total Chignik sockeye salmon catch is 100% of those sockeye salmon caught within the Chignik Management Area, plus 80% of those sockeye salmon caught in the Cape Igvak Section of the Kodiak Management Area, plus 80% of those sockeye salmon caught in the Southeastern District Mainland fishery excluding 100% of those sockeye salmon caught in Orzinski Bay.

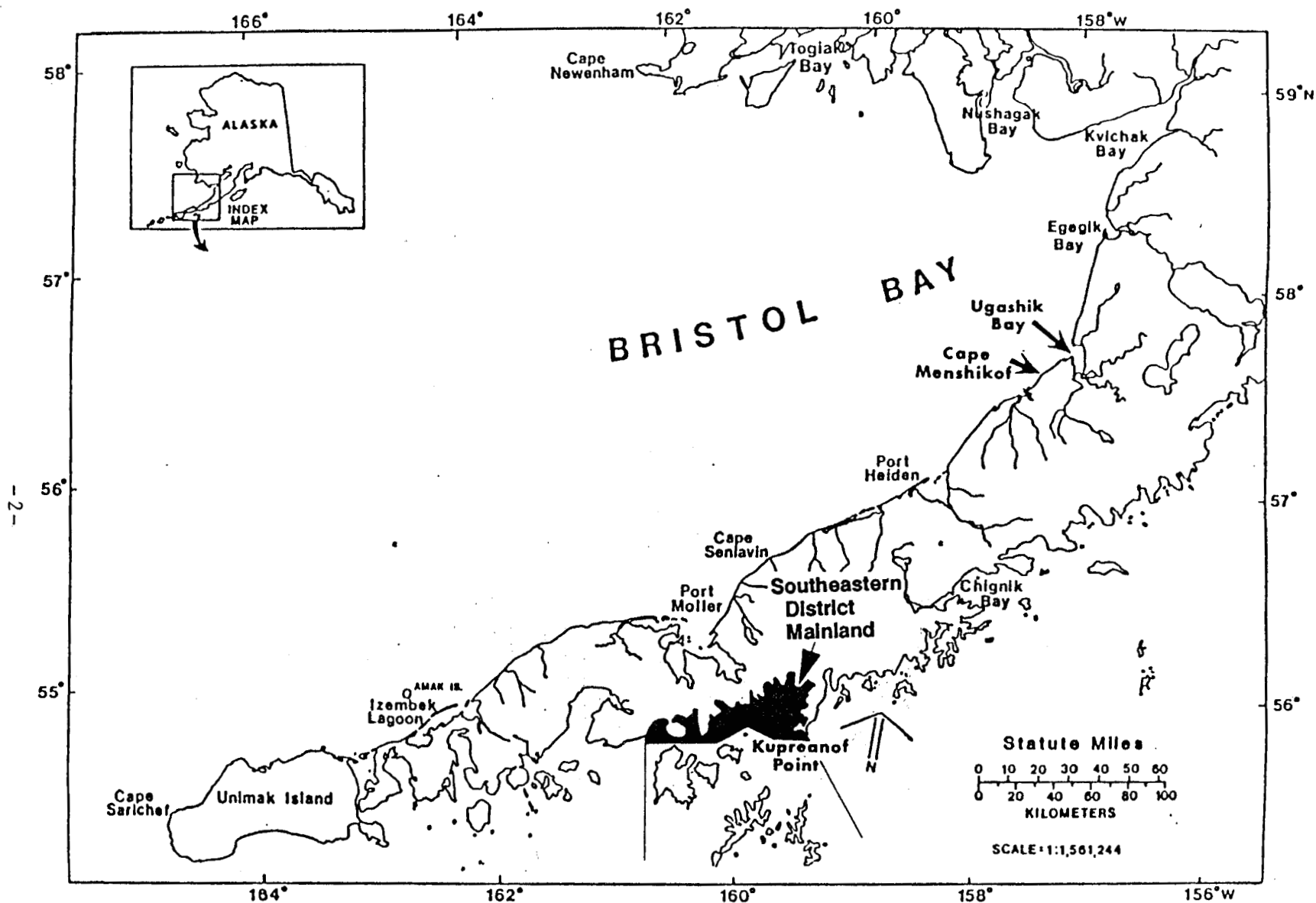


Figure 1. Map of the Alaska Peninsula Management Area with the Southeastern District Mainland area defined.

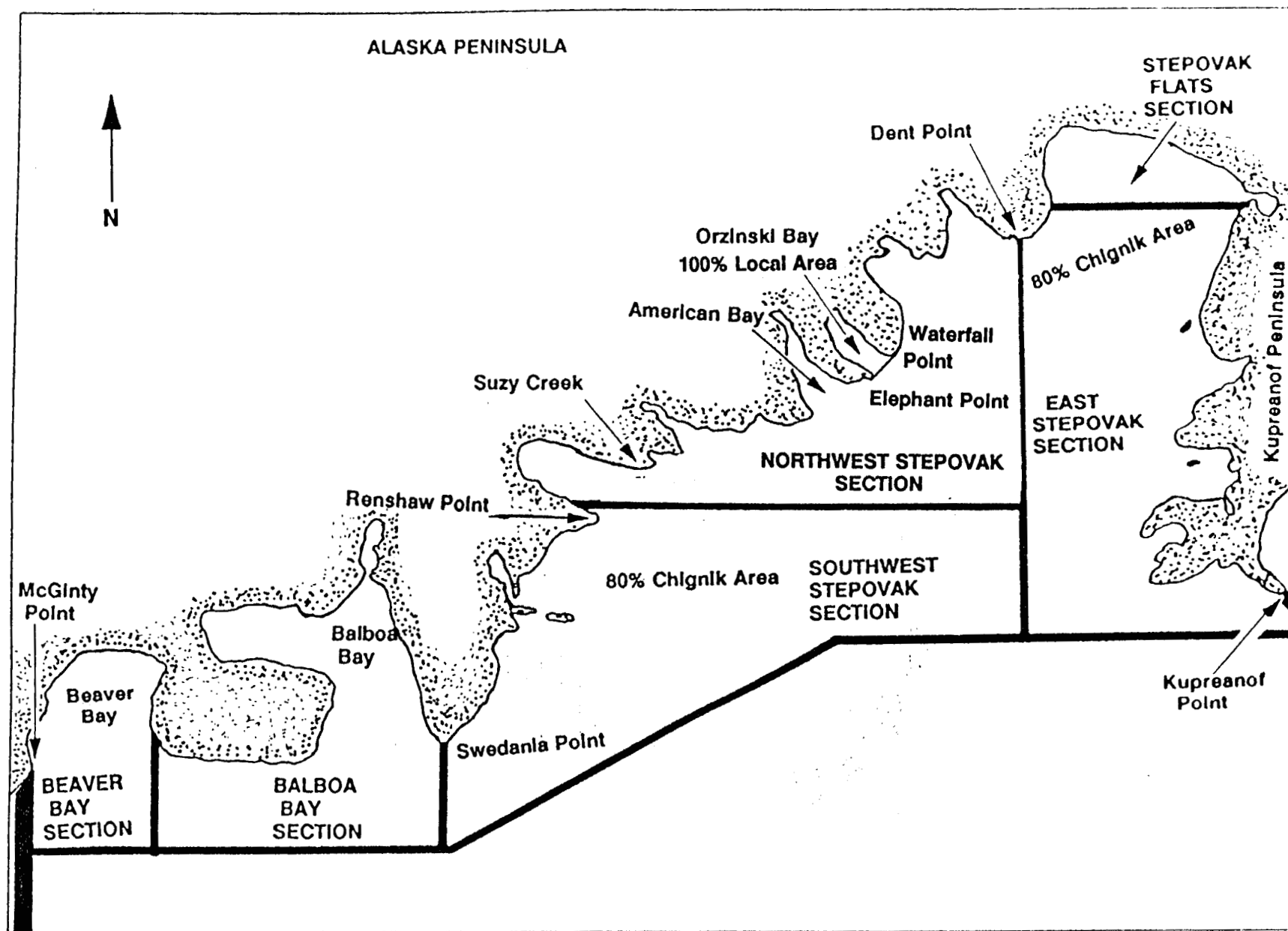


Figure 2. Map of the Southeastern District Mainland fishery from Kupreanof Point to McGinty Point with the salmon sections defined.

Table 1. Southeastern District Mainland fishery catch of Chignik destined sockeye salmon through July 25, 1983-92.¹

Year	Number of Salmon			
	Total Catch	Northwest Stepovak ²	Total Catch Minus Northwest Stepovak	Chignik Bound Catch ¹
1983	300,158	15,918	284,240	227,392
1984	595,043	66,209	528,834	423,067
1985	80,957	16,681	64,276	51,421
1986	206,532	59,025	147,507	118,006
1987	244,895	61,287	183,608	146,886
1988	81,160	57,010	24,150	19,320
1989	89,224	83,618	5,606	4,484
1990	164,028	3,279	160,749	128,599
1991	289,727	98,834	190,893	152,714
1992	215,444	98,138	117,306	93,845
Average:				
5 Year	167,917	68,176	99,741	79,792
10 Year	226,717	56,000	170,717	136,573

¹From 1970-91, the Chignik contribution is 80% of the sockeye salmon harvested in Beaver Bay, Balboa Bay, Southwest Stepovak, Stepovak Flats, and East Stepovak Sections. In 1992, the Chignik contribution is 80% of the sockeye salmon harvested in the Southeastern District Mainland fishery except Orzinski Bay where 100% of the sockeye salmon are considered local production.

²From 1970-91, the Northwest Stepovak Section figures include the harvest from the entire Northwest Stepovak Section. In 1992 the figure includes only the Orzinski Bay harvest.

Because the harvestable surplus is expected to exceed 600,000 sockeye salmon, the Southeastern District Mainland fishery may open when the fishery opens in the Chignik Management Area. Based on the 1,200,000 sockeye salmon early run harvest forecast, it is possible that the first opening for the Southeastern District Mainland fishery could be in early to mid-June.

If the first run fails to develop as expected, the Southeastern District Mainland fishery will be curtailed in order to allow a minimum harvest in the Chignik Area of at least 300,000 sockeye through July 8, if that many salmon are surplus to escapement requirements.

During the period from about June 26 through July 9, the strength of the second run of Chignik River sockeye salmon cannot be evaluated at Chignik. To prevent over-harvest of the second run, commercial salmon fishing in the Southeastern District will, at the Alaska Department of Fish and Game's (ADF&G) discretion, be disallowed or severely restricted during this period.

After July 8, fishing time in the Southeastern District Mainland fishery will be dependent upon the strength of the second run as evaluated at Chignik and on the catch of Chignik bound sockeye during the first run at Cape Igvak, Chignik, and the Southeastern District Mainland fisheries. When the second run escapement goals are being met and the second run appears strong enough for a fishery at Chignik, the Southeastern District Mainland may open to commercial salmon fishing if at least 300,000 combined first and second run sockeye salmon were harvested in the Chignik Area. ADF&G will manage the fishery so that the number of sockeye salmon harvested in the Chignik Area from both runs combined will be at least 600,000 salmon and the harvest in the Southeastern District Mainland will approach as near as possible 7.0% of the total Chignik bound sockeye salmon catch (Appendix C), if that many sockeye salmon are surplus to escapement requirements.

The fishery shall be managed according to the plan as stated in the 1992-1994 Bristol Bay and Westward Alaska commercial salmon fishing regulation book (Appendix A). No attempt will be made to allow equal fishing time with Chignik, as had been done from 1974 through 1977, but rather the end goal will be to meet the 7.0% allocation level after the conditions of the management plan have been satisfied. An interim management goal of 7.0% at midnight July 10 will also be attempted after the conditions of the management plan have been satisfied. The interim management goal of 7.0% at midnight July 10 is desirable to achieve historical harvest levels between set gill net and purse seine fishermen; purse seine gear is legal in the fishery after July 10. To meet the goal of 7.0% by July 11 and July 25, the percentage may fluctuate above or below 7.0% prior to July 11 and July 25. Because of the restrictions placed upon the Southeastern District Mainland fishery to protect the Chignik runs, it may not be possible to achieve a 7.0% allocation level, even though escapement goals are met and the minimum catch level of 600,000 salmon at Chignik is exceeded.

The Southeastern District Mainland fishery is regulated by a management plan that is independent of other fisheries occurring in the Alaska Peninsula Management Area. Because the fishery is primarily effected by sockeye salmon catches in the Kodiak and Chignik Management Areas, while being independent of other Alaska Peninsula Management Area fisheries except for fishing effort, the Southeastern District Mainland area will have independent fishing periods from those in the Shumagin Islands Section and other areas of the South Peninsula. ADF&G will attempt to have fishing periods in Orzinski Bay and Stepovak Flats concurrent with other fishing periods in the Southeastern District Mainland area.

There has been confusion for several years concerning the definition of Dent Point. A map of the Dent Point area is found on Figure 3. The Alaska Board of Fisheries approved definition of Dent Point is 55° 47'15" N. lat., 159° 52'00" W. long. (based on 1983 datum chart). This definition of Dent Point will be used as: (1) the boundary between the Northwest Stepovak and Stepovak Flats Sections; (2) as one of the closed waters points for Stepovak Bay when the head of Stepovak Bay is closed from July 29 through September 30; and (3) whenever an ADF&G reference is made regarding Dent Point.

Local Stocks

Orzinski Bay in the Northwest Stepovak Section and the Stepovak Flats Section will be managed on a local stock basis. Orzinski Bay will be managed on the basis of the Orzinski Lake sockeye salmon stock from June 1 through about July 25, and after about July 25 on local sockeye and pink salmon runs. The Stepovak Flats Section will be managed on the basis of the Stepovak River chum salmon stock. The entire Southeastern District Mainland area will be managed on the basis of local stocks (sockeye, pink, chum, and coho salmon) after July 25.

Northwest Stepovak Section

The sockeye escapement goal for Orzinski (Orzenoi) Lake is 20,000 salmon as estimated from the production potential of the lake (A.R. Shaul, Alaska Department of Fish and Game, Kodiak, personnel communication). In 1992, the total estimated sockeye escapement was 25,000 salmon. ADF&G intends to operate a weir on the Orzinski system in 1993, similar to the 1992 weir.

A weir was used to count escapements into the lake from 1935 to 1941, and in 1990-92. The earliest recorded sockeye escapement occurred on June 11, 1940 (11 salmon), while the usual pattern of first entry into the lake is about June 17. July 17 is the average date of 50% cumulative sockeye escapement, while on the average

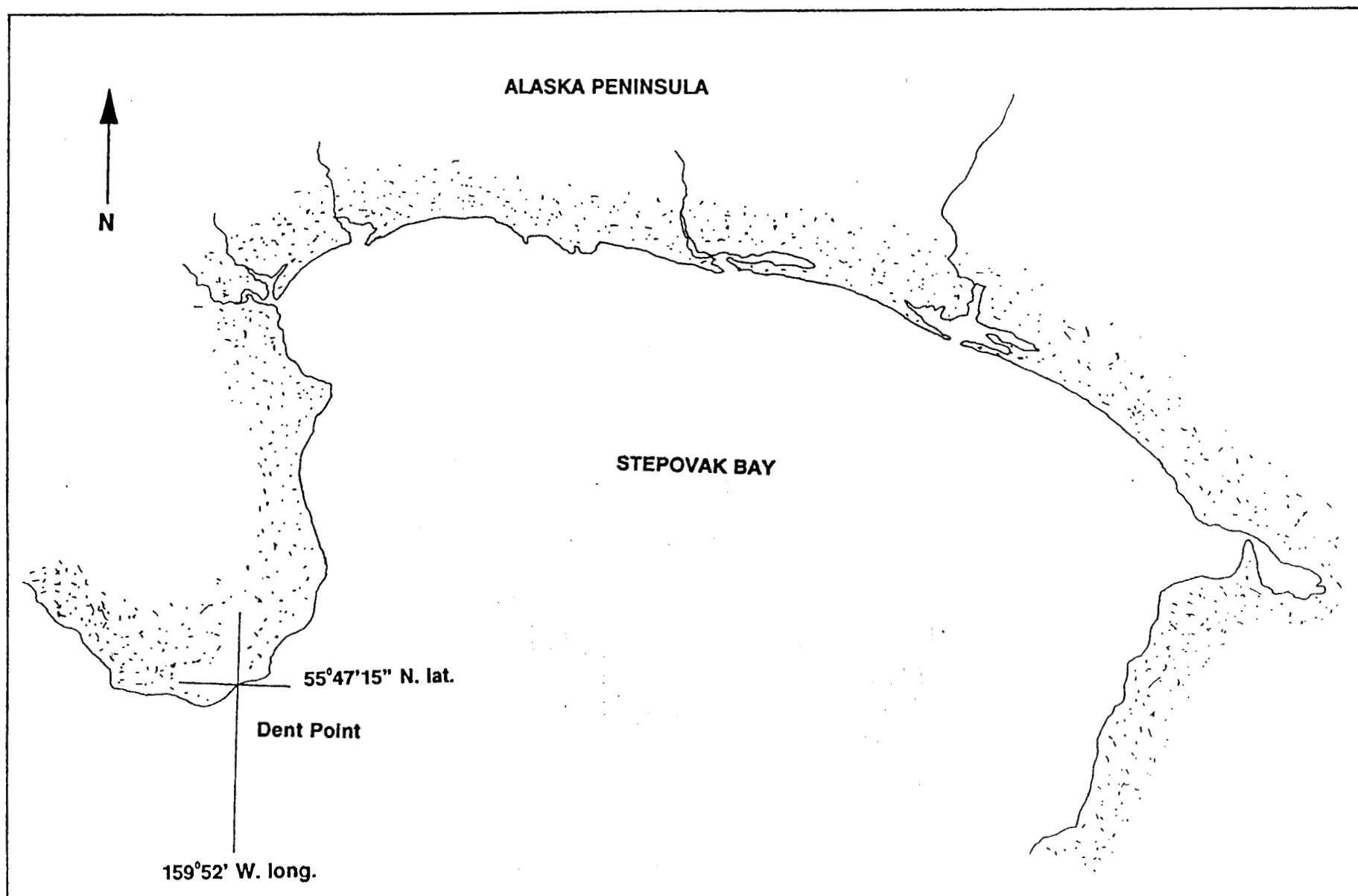


Figure 3. Map of Stepovak Bay with Dent Point defined.

99% of the escapement occurs by August 7. Based on aerial surveys and weir counts, sockeye salmon escapement requirements for Orzinski Lake by time periods has been developed (Table 2).

Through July 25, 1992, Orzinski Bay will have fishing periods basis on the Orzinski Lake sockeye salmon weir counts. Sockeye salmon caught within Orzinski Bay (north of a line from Elephant Point at 55°41'50" N.lat., 160°03'18" W.long. to Waterfall Point at 55°43'10" N.lat., 160°01'08" W.long.) will be allocated 100% to the Orzinski Lake run. Sockeye salmon caught in the remainder of the Southeastern District Mainland fishery will be allocated 80% to the Chignik system runs. After July 25, fishing time will be based on local sockeye, pink, chum, and coho salmon stocks. If the sockeye salmon escapement goals into Orzinski Lake are not met, Orzinski Bay will be closed north of a line from Elephant Point (55°41'50" N.lat., 160°03'18" W.long.) to Waterfall Point (55°43'10" N.lat., 160°01'08" W.long.), until management of the bay shifts to pink salmon.

Stepovak Flats Section

The Stepovak Flats Section will be managed on the basis of the chum salmon run into Stepovak River (local stock basis). Through July 11, this section will open to commercial salmon fishing on a day per day basis with the remainder of the Southeastern District Mainland fishery. Sockeye harvested in this section will be assigned as 80% Chignik bound and are included as part of the 7.0% allocation criteria set forth in the Southeastern District Mainland management plan. After July 10, the Stepovak Flats Section will be managed on the basis of the chum salmon run into Stepovak River. Fishermen are reminded that this section is usually closed to commercial salmon fishing from July 29 through September 30 (5 AAC 09.350(23)).

Table 2. Sockeye salmon escapement requirements for Orzinski Lake.

Time Period	Cumulative Escapement Goal
June 15	0
July 1	2,000
July 9	5,000
July 16	10,000
July 23	15,000
August 7	20,000
Season Total	20,000

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APPENDIX

APPENDIX A: SOUTHEASTERN DISTRICT SALMON MANAGEMENT PLAN

5 AAC 09.360. SOUTHEASTERN DISTRICT SALMON MANAGEMENT PLAN

(a) This plan pertains to the management of the interception of Chignik River sockeye salmon caught in the Southeastern District Mainland fishery: East Stepovak, Stepovak Flats, Northwest Stepovak, Southwest Stepovak, Balboa Bay, and Beaver Bay Sections. Before July 11, only set gill net gear may be used in these sections. For the purpose of this plan, local runs include only those salmon in the waters:

- 1) north of a line in Orzinski Bay from Elephant Point (55° 41'50" N.lat., 160° 03'18" W.long.) to Waterfall Point (55° 43'10" N.lat., 160° 01'08" W.long.) and:
- 2) the Stepovak Flats Section as described in 5 AAC 09.200(f).

(b) In years when a harvestable surplus for the first (Black Lake) and second (Chignik Lake) runs of Chignik River system sockeye salmon is expected to be less than 600,000, no commercial salmon fishery is allowed in the East Stepovak, Northwest Stepovak (except Orzinski Bay), Southwest Stepovak, Balboa Bay, and Beaver Bay Sections, as described in 5 AAC 09.200(f), until a harvest of 300,000 sockeye salmon in the Chignik Area, as described in 5 AAC 15.100, is achieved. After July 8, if at least 300,000 sockeye salmon have been harvested in the Chignik Area, and if escapement goals are being met, the department shall manage the fishery so that the number of sockeye salmon harvested in the Chignik Area will be at least 600,000 and the East Stepovak, Stepovak Flats, Northwest Stepovak (except Orzinski Bay), Southwest Stepovak, Balboa Bay, and Beaver Bay Sections approaches as near as possible seven percent of the total Chignik sockeye salmon catch.

(c) In years when a harvestable surplus beyond escapement goals for the first and second runs of Chignik River system sockeye salmon is expected to be more than 600,000 but the first run fails to develop as predicted and it is determined that a total sockeye salmon harvest in the Chignik Area of 600,000 or more may not be achieved, the commercial salmon fishery in the East Stepovak, Stepovak Flats, Northwest Stepovak (except Orzinski Bay), Southwest Stepovak, Balboa Bay, and Beaver Bay Sections must be curtailed in order to allow at least a minimum harvest in the Chignik Area of 300,000 sockeye salmon by July 9 if that number of fish are determined to be surplus to the escapement goals of the Chignik River system. After July 8, if at least 300,000 sockeye salmon have been harvested in the Chignik Area, and if escapement goals are being met, the department shall manage the fishery so that the number of sockeye salmon harvested in the Chignik Area is at least 600,000 and the East Stepovak, Stepovak Flats, Northwest Stepovak (except Orzinski Bay), Southwest Stepovak, Balboa Bay, and Beaver Bay Sections approaches as near as possible seven percent of the total Chignik sockeye salmon catch.

(d) In years when a harvestable surplus beyond the escapement goals for the first and second runs of Chignik River system sockeye salmon is expected to be more than 600,000 and the department determines that the runs are as strong as expected, the department shall manage the fishery so that the number of sockeye salmon taken in the East Stepovak, Stepovak Flats, Northwest Stepovak (except Orzinski Bay), Southwest Stepovak, Balboa Bay, and Beaver Bay Sections approaches as near as possible seven percent of the total Chignik sockeye salmon catch.

(e) The estimate of sockeye salmon destined for the Chignik River has been determined to be 80 percent of the sockeye salmon harvested in the East Stepovak, Stepovak Flats, Northwest Stepovak (except Orzinski Bay), Southwest Stepovak, Balboa Bay, and Beaver Bay Sections. The remaining sockeye salmon taken in the Southeastern District Mainland fishery have been determined to be destined for Orzinski Bay.

(f) The total Chignik sockeye salmon catch constitutes those sockeye salmon caught within the Chignik Area, plus 80 percent of the sockeye salmon caught in the East Stepovak, Stepovak Flats, Northwest Stepovak (except Orzinski Bay), Southwest Stepovak, Balboa Bay, and Beaver Bay Sections, as described in 5 AAC 09.200(f), plus 80 percent of the sockeye salmon caught in the Cape Igvak Section of the Kodiak Area. The percentage of Chignik sockeye salmon may be permitted to fluctuate above or below seven percent at any time before July 25.

(g) This allocation method is in effect through July 25. The first fishing period of the commercial salmon fishing season in the East Stepovak, Northwest Stepovak (except Orzinski Bay), Southwest Stepovak, Balboa Bay, and Beaver Bay Sections may not occur before the first fishing period of the commercial salmon fishing season in the Chignik Area. After July 25, commercial salmon fishing in the entire Southeastern District Mainland area may be allowed on local stocks.

(h) During the period from approximately June 26 to July 9, the strength of the second run of the Chignik River system sockeye salmon cannot be evaluated. In order to prevent over-harvest of the second run, the department may disallow or severely restrict commercial salmon fishing in the East Stepovak, Stepovak Flats, Northwest Stepovak (except Orzinski Bay), Southwest Stepovak, Balboa Bay, and Beaver Bay Section during this period.

(i) The department shall announce all commercial salmon fishing periods by emergency order. The department shall give at least 24 hour notice before the opening of a commercial salmon fishing period, unless it is an extension of a fishing period in progress.

APPENDIX B: CHIGNIK MANAGEMENT AREA PRELIMINARY SOCKEYE FORECAST

CHIGNIK MANAGEMENT AREA PRELIMINARY SOCKEYE FORECAST

FORECAST AREA: Chignik Management Area

SPECIES: Sockeye Salmon

PRELIMINARY FORECAST OF THE 1993 RUN

<u>Early Run (Black Lake)</u>	<u>Point Estimate</u>	<u>80% Prediction Forecast Range</u>
Escapement Goal:	400,000	
Harvest Estimate:	1,200,000	
Return Estimate:	1,640,000	1,120,000 - 2,160,000
<u>Late Run (Chignik Lake)</u>		
Escapement Goal:	250,000	
Harvest Estimate:	700,000	
Return Estimate:	950,000	620,000 - 1,620,000
<u>Total Chignik Run</u>		
Escapement Goal:	650,000	
Harvest Estimate:	1,900,000	
Return Estimate:	2,590,000	1,740,000 - 3,780,000

FORECAST METHODS:

The estimated run to Black Lake is the sum of a regression estimate for two major age classes (ages 1.3 and 2.3) and a 10-year average for minor age classes, while the Chignik Lake run is based on a recruit per spawner relationship. The Black Lake forecast is based on the historical relationship between the number and length of prior year age 1.2 fish, and the parent year escapement number. All other age classes are predicted from a 10-year average. The Chignik Lake forecast accuracy has historically been quite variable and developing a model such as the one used for the Black Lake run has been unsuccessful. The Chignik Lake run forecast for 1993 was derived using an average return per spawner ($R/S = 4.41$) for years post-1969.

DISCUSSION OF THE 1993 FORECAST:

Early Run

The 1993 Black Lake sockeye salmon run is expected to be 1.64 million fish. This is approximately 0.10 million fish less than the 1982-91 average run of 1.74 million fish and 200,000 fish less than the 1992 forecast. This below average run is expected because in 1992 age 1.2 fish numbered 33,005 less than the 10 year average of 175,456.

Late Run

The estimated 1993 Chignik Lake sockeye run is 0.95 million fish, 20,000 less than the 1982-91 average of 1.15 million fish. The Chignik Lake run forecast accuracy has historically been quite poor when compared to actual returns. The 1987 parent year, which is expected to produce 60% of the 1993 run, was 35,548 below the 250,000 desired escapement goal.

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APPENDIX C: APPLICATION OF FISHERY MANAGEMENT PLANS

5 AAC 39.200 APPLICATION OF FISHERY MANAGEMENT PLANS

(a) The Board of Fisheries has implemented by regulation fishery management plans that provide the Department of Fish and Game with guidelines to be followed when making management decisions regarding the state's subsistence, commercial, sport and personal use fisheries. The primary goal of these management plans is to protect the sustained yield of the state's fishery resources while at the same time providing an equitable distribution of the available harvest between various users. The regulations contained in this section are intended to aid in the achievement of that goal and therefore will apply to all fishery management plans contained in 5 AAC 03-5 AAC 39.

(b) In some fishery management plans, the distribution of harvestable fish between various users is determined by the harvest that occurs during a specific time period, at a specific location, or by a specific group or groups of users. At times fishermen, due to circumstances that are beyond the control of the department, such as weather or price disputes, will not harvest fish. When this happens in a fishery governed by a management plan, the goals of the plan may not be achieved. Therefore, when a fishery is open to the taking of fish and the group or groups of users whose catch determines the distribution of the harvest as set out in the applicable management plan are not taking the harvestable fish available to them, the department shall manage the fishery as if the available harvest is being taken. When determining the available harvest, the department shall consider the number of fish needed to meet spawning requirements, the number of fish present in the fishery and in spawning areas that are in excess to spawning requirements, and the estimated harvesting capacity of the group or groups of users that would normally participate in the fishery.

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